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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/483,386	01/13/2000	Li-Wen Chen	19608-000230US	8309

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EXAMINER

COLBERT, ELLA

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 01/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/483,386

**Applicant(s)**

CHEN, LI-WEN

**Examiner**

Ella Colbert

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-6, 11, 21-24, 29, 31-33 and 39-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-6, 11, 21-24, 29, 31, 32 and 39-42 is/are allowed.
- 6) ☒ Claim(s) 43-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 2-6, 11, 21-24, 29, 31-33, 39-55 are pending in this communication filed 11/15/04 entered as Response After Non-Final Action. Claims 43, 48, and 54 were amended.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." *Diamond v. Chakrabarty*, 447 U.S. 303, 308-09, 206 USPQ at 193, 197 (1980).

3. Claims 43-55 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

(1) whether the claimed subject matter is directed to a "practical application"; or  
(2) whether the invention produces "a useful, concrete and tangible result.", that is, whether the claimed subject matter is applied in a practical manner to produce a useful result. "[C]ertain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, i.e., 'a useful, concrete and tangible result.' (State Street, 149 F.3d 1373, 47 USPQd at 1600-01 (citing Alppat, 33 F.3d 1544, 31 USPQ2d at 1557)).

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract ideas, law of nature, natural phenomena) that do not apply, involve, use, or advance technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as

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opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

(A) In the present case, claims 43-55 recite an abstract idea only. The recited method and steps of the claims merely, a) organized according to a first data schema, defining a virtual data model, determining from the virtual data model, receiving input, creating a third database, creating a first mapping, creating a second mapping, selectively migrating information, and a virtual data model in claim 43; and b) receiving a definition, generating a data warehouse, providing the data warehouse, receiving input, dynamically creating a database, creating a first dimension, creating a fact table, and displaying a portion of the dynamically generated database in claim 48; and (c) creating a mapping, migrating data from a data source, and providing data do not apply, involve, use, or advance the technological arts since all of the recited method steps can be performed in the mind of the user or by use of a pencil and paper. These steps only constitute an idea of how to analyze and visualize information. The claims do not have a computer performing the method in the preamble or a computer in the body of the claims performing the organizing, receiving a definition, and creating a mapping.

In addition, for a claimed invention to be statutory, it must produce a useful, concrete, and tangible result. In the present case, the claimed invention produces a method for the virtual data model to comprise a reverse star schema, receiving a definition of a reverse star schema meta-model and providing the data to the OLAP server (i.e., useful and tangible).

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Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 43-55 are deemed to be directed to non-statutory subject matter.

With respect to the rejection under 35 U.S.C § 101, the Examiner asserts that the claimed invention does not fall within the technological arts because no form of technology is disclosed or claimed.

***Allowable Subject Matter***

4. Claims 29, 39, and 40 are allowed.

The following is an Examiner's statement of reasons for allowance: claim 29 reciting "virtual data model comprises a reverse star schema", claim 39 reciting "code for generating a data warehouse populated with the information from the source database and in accordance with the reverse star schema meta-model", and claim 40 reciting "the meta-model schema is a reverse star schema" was not shown or suggested by the prior art of record.

5. The dependent claims 2-6, 11, 21-24, 31-33 and 41-42 being further limiting to the independent claims, definite and fully enabled by the Specification are also allowable.

Claims 43-55 will also be allowable once the 35 U.S.C. 101 rejection is overcome.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

5. Applicant's arguments filed 11/15/04 have been fully considered but they are not persuasive.

Issue no. 1: Applicant argues: Applicant respectfully traverses the 35 USC 101 rejection and submits that the rejection is improper for at least the following reasons: (1) the embodiments recited by claims 43-55 are directed to a practical applications, in contrast to the abstract ideas (i.e., abstract ideas, law of nature, natural phenomena) that the Office Action argues, "do not apply, involve, use, or advance technological arts" and "fail to promote the 'progress of science and the useful arts'"; (2) the embodiment recited by claims 43-55 produces a concrete useful and tangible result; and (3) Applicant's intended embodiment recited by claims 43-55 is performed by a computer.

Response: Claim 43 recites "A computer implemented method for analyzing information in a first database, ..., the method comprising computer implemented steps of:". The usage of the word "implemented" has a very broad meaning. The Office does not know how the computer implements the steps. It is suggested to change the word "implemented" to "performing" the steps. The claims that stand rejected under 35 USC 101 as non-statutory are claims 43-55. The method claims as presented do not claim a technological basis in the body of the claim. Without a claimed basis, the claim may be interpreted in an alternative as involving no more than a mere manipulation of an

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abstract idea and therefore non-statutory under 35 USC 101. In contrast, a method claim that includes in the body of the claim at least one structural/functional interrelationship which can only be computer implemented is considered to have a technological basis [See Ex parte Bowman, 61 USPQ2d 1669, 1671 (Bd. Pat. App. & Inter. 2001) –used only for content and reasoning since not precedential].

Suggestion to resolve the 35 USC 101 rejection: Claim 43. "A computer implemented method for ..., said first database organized according to a first data schema, the method comprising a computer performing the steps of:" or "A ....; at the computer defining a virtual data model;". Claim 48. "A computer implemented method, the method comprising a computer performing the steps of:" or "A computer implemented method, ....: receiving at the computer a definition of a reverse star schema meta-model;". Claim 54. "A computer implemented method of visualizing information, the method comprising a computer performing the steps of:" or "A computer implemented method of visualizing information, the method comprising a computer performing the steps of: creating at the computer a mapping based upon a virtual meta-model schema, the mapping providing a".

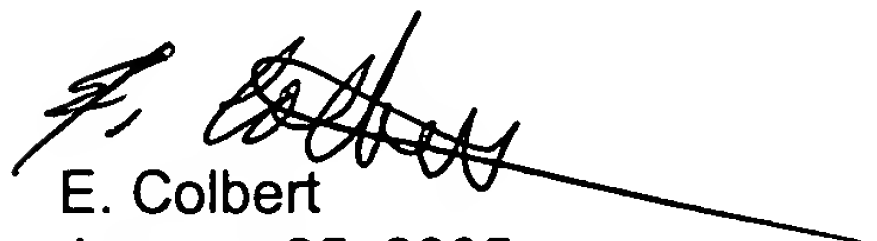
### **Inquiries**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner normally works a Flexible Schedule.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
E. Colbert  
January 25, 2005